



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/543,223	04/05/2000	Stephen S. Jackson	2204/A35	7263
34845	7590	03/24/2006	EXAMINER PHAN, HANH	
STEUBING MCGUINNESS & MANARAS LLP 125 NAGOG PARK ACTON, MA 01720			ART UNIT 2613	PAPER NUMBER

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/543,223

Applicant(s)

JACKSON ET AL.

Examiner

Hanh Phan

Art Unit

2638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 11/22/2005.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 26 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

-Claim 26 recites the limitation "**the primary optical signal**" in line 2. There is insufficient antecedent basis for this limitation in the claim.

-Claim 33 recites the limitation "**the primary optical signal**" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 5-10, 13-18 and 22-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dewberry et al (US Patent No. 6,507,425) in view of Gfeller et al (US Patent No. 6,424,442).

Regarding claims 1, 9, 17 and 47, referring to Figure 3, Dewberry discloses a method of processing a data signal for transmission to a remote device, the method comprising:

synchronizing the data signal with a clock signal to produce a composite signal (Fig. 3, col. 3, lines 40-67 and col. 4, lines 1-12); and

converting the composite signal to an outgoing signal, the outgoing signal being a wireless optical signal (i.e., infrared transceiver 210, Fig. 3, converting the composite signal to an optical signal, col. 3, lines 40-67 and col. 4, lines 1-12).

Dewberry differs from claims 1, 9, 17 and 47 in that he fails to disclose transmitting a plurality of copies of the outgoing signal, at least two copies of the outgoing signal being transmitted in different directions. However, Gfeller in US Patent No. 6,424,442 discloses converting a data signal to an outgoing signal, the outgoing signal being a wireless optical signal and transmitting a plurality of copies of the outgoing signal, at least two copies of the outgoing signal being transmitted in different directions (Figures 1, 3-5, 7 and 10-15, col. 4, lines 29-67 and col. 5, lines 1-55). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the transmitting a plurality of copies of the outgoing signal, at least two copies of the outgoing signal being transmitted in different directions as taught by Gfeller in the system of Dewberry. One of ordinary skill in the art would have been motivated to do this since Gfeller suggests in column 4, lines 29-67 and col. 5, lines 1-55 that using such the transmitting a plurality of copies of the outgoing have advantage of allowing eye safety to the highest possible degree, optimum source

radiation pattern distributing the power limited optical signal in an efficient way to gain maximum transmission distance at minimum dynamic range and no need for aligning transmitters and receivers.

Regarding claims 2, 10, 18, 27, 34 and 41, the combination of Dewberry and Gfeller teaches the outgoing signal is in the infrared spectrum (Fig. 3 of Dewberry and Fig. 1 of Gfeller).

Regarding claims 5, 13, 21, 48 and 49, the combination of Dewberry and Gfeller teaches receiving an incoming signal, the incoming signal being an optical signal and having a specified timing signal, the clock signal of the composite signal being synchronized with the specified timing signal (Fig. 1 of Dewberry).

Regarding claims 6, 14, 22, 29, 36 and 43, the combination of Dewberry and Gfeller teaches wherein the data signal includes at least one of video data and audio data (Fig. 1 of Dewberry).

Regarding claims 7, 15, 23, 28, 35 and 42, the combination of Dewberry and Gfeller teaches wherein the plurality of copies of the outgoing signal are transmitted through the air (Fig. 1 of Gfeller).

Regarding claims 8, 16, 24, 31, 38, 45 and 46, the combination of Dewberry and Gfeller teaches where the different directions overlap (Figs. 1-3 of Gfeller).

Regarding claims 25, 30, 32, 37, 39, 44 and 50, Dewberry teaches all the aspects of the claimed invention as set forth in the rejection to claims 1, 9, 17 and 47 above except fails to teach receiving a plurality of copies of a single optical signal, the optical signal being the optical form of a first data signal and converting the plurality of

copies of the optical signal into a plurality of second data signals, each second data signal having data from one of the copies of the optical signal. However, Gfeller in US Patent No. 6,424,442 discloses receiving a plurality of copies of a single optical signal, the optical signal being the optical form of a first data signal and converting the plurality of copies of the optical signal into a plurality of second data signals, each second data signal having data from one of the copies of the optical signal (Figures 14 and 15A, col. 7, lines 47-67 and col. 8, lines 1-10). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the receiving a plurality of copies of a single optical signal, the optical signal being the optical form of a first data signal and converting the plurality of copies of the optical signal into a plurality of second data signals, each second data signal having data from one of the copies of the optical signal as taught by Gfeller in the system of Dewberry. One of ordinary skill in the art would have been motivated to do this since Gfeller suggests in column 7, lines 47-67 and col. 8, lines 1-10 that using such the transmitting a plurality of copies of the outgoing have advantage of allowing eye safety to the highest possible degree, optimum source radiation pattern distributing the power limited optical signal in an efficient way to gain maximum transmission distance at minimum dynamic range and no need for aligning transmitters and receivers.

Regarding claims 26, 33 and 40, the combination of Dewberry and Gfeller teaches wherein the act of reconstructing comprises designating one of the plurality of copies of the optical signal as the primary optical signal, the second data signal in memory that represents the primary optical signal being the primary second data signal

Art Unit: 2638

and retrieving primary second data signal and if the primary second data signal is incomplete, then retrieving additional data of the first data signal from at least one of the other second data signals in memory (Fig. 3 of Dewberry and Fig. 14 and 15A of Gfeller).

6. Claims 3, 11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dewberry et al (US Patent No. 6,507,425) in view of Gfeller et al (US Patent No. 6,424,442) and further in view of Shibuya (US Patent No. 6,509,991).

Regarding claims 3, 11 and 19, Dewberry as modified by Gfeller teaches all the aspects of the claimed invention except fails to teach amplifying the outgoing signal. However, Shibuya teaches amplifying the outgoing signal (Fig. 3, col. 3, lines 56-64). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the amplifying the outgoing signal as taught by Shibuya in the system of Dewberry modified by Gfeller. One of ordinary skill in the art would have been motivated to do this since Shibuya suggests in column 3, lines 56-64 that using such the amplifying the outgoing signal have advantage of allowing increasing the power level of the signal to a desired level.

7. Claims 4, 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dewberry et al (US Patent No. 6,507,425) in view of Gfeller et al (US Patent No. 6,424,442) and further in view of Rutledge (US Patent No. 5,864,625).

Regarding claims 4, 12 and 20, Dewberry as modified by Gfeller teaches all the aspects of the claimed invention except fails to teach encrypting the composite signal prior to converting it to the outgoing signal. However, Rutledge in US Patent No. 5,864,625 teaches encrypting the composite signal prior to converting it to the outgoing signal (Fig. 1, col. 3, lines 6-67 and col. 4, lines 1-14). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the encrypting the composite signal prior to converting it to the outgoing signal as taught by Rutledge in the system of Dewberry modified by Gfeller. One of ordinary skill in the art would have been motivated to do this since Rutledge suggests in column 3, lines 6-67 and col. 4, lines 1-14 that using such the encrypting the composite signal prior to converting it to the outgoing signal have advantage of allowing a secure optical communications link.

Response to Arguments

8. Applicant's arguments with respect to claims 1-50 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

Art Unit: 2638

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.



HANH PHAN
PRIMARY EXAMINER